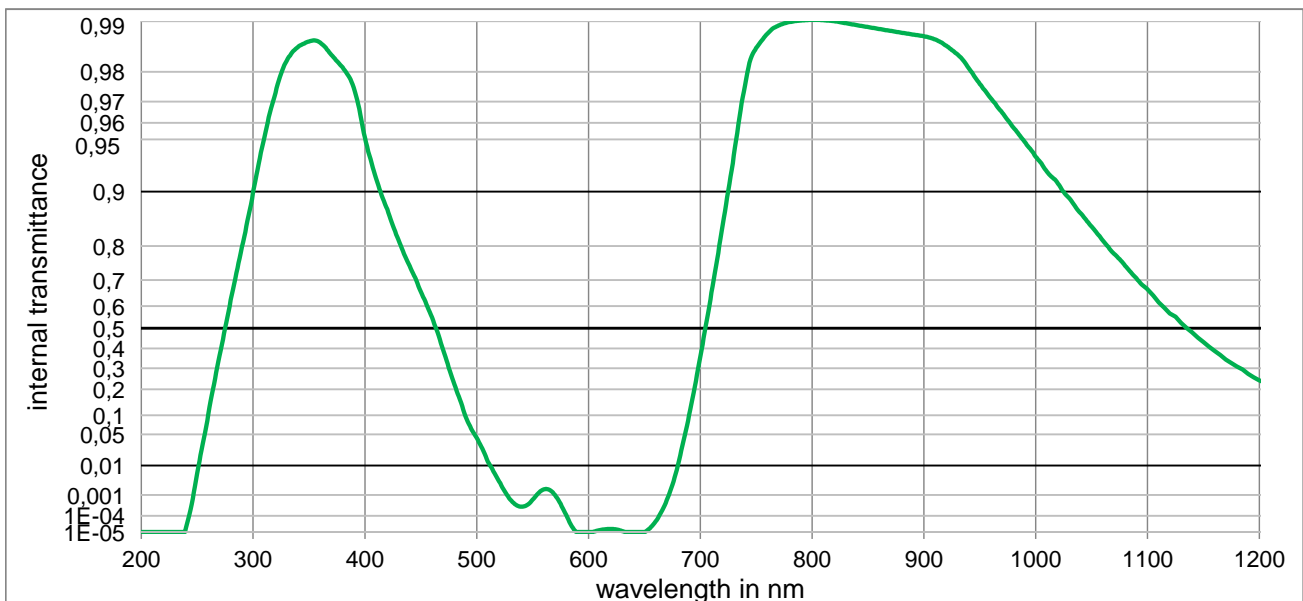
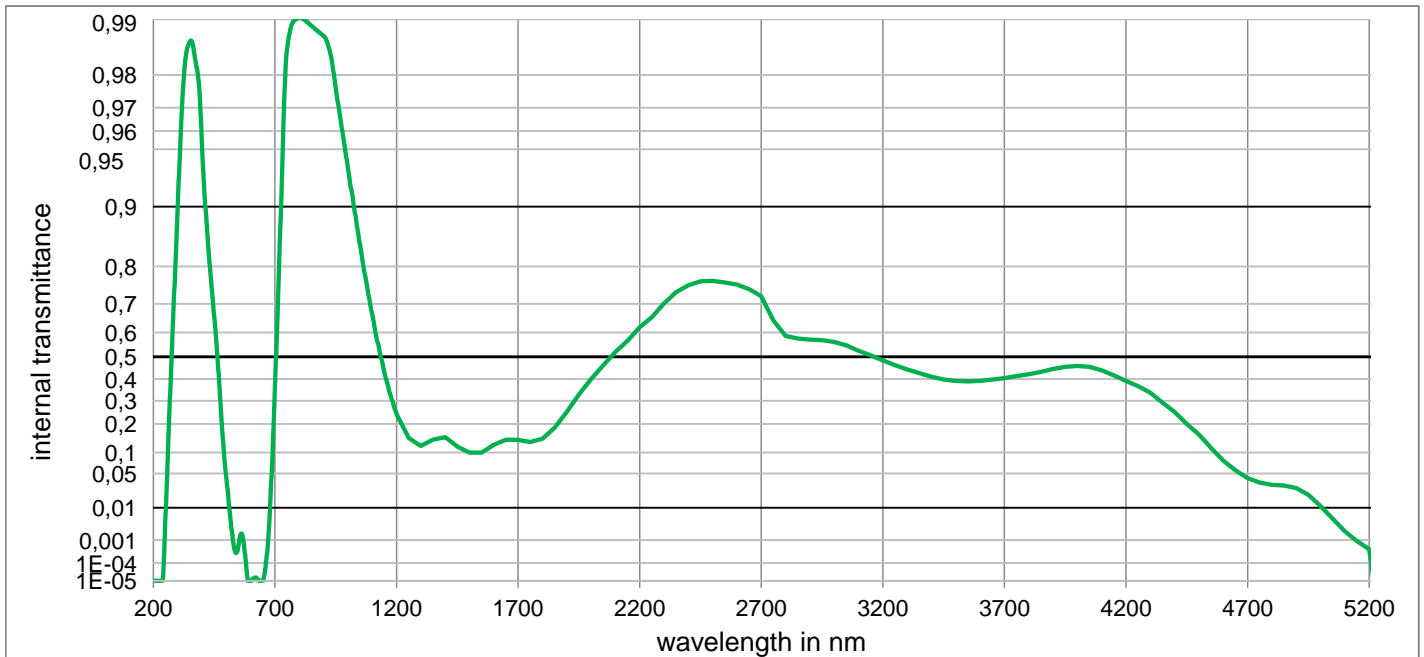


## BG3

Optical properties	Mechanical properties	Colormetric properties																					
<b>Reflection factor</b>	<b>Reference thickness</b>	1 mm      2 mm      3 mm																					
$P_d = 0,921$	$d = 1,00 \text{ mm}$	<table border="1"> <tr> <td rowspan="5">Illuminant D65</td> <td>x</td> <td>0,154</td> <td>0,160</td> <td>0,163</td> </tr> <tr> <td>y</td> <td>0,029</td> <td>0,018</td> <td>0,014</td> </tr> <tr> <td>Y</td> <td>2,0</td> <td>0,8</td> <td>0,5</td> </tr> <tr> <td><math>\lambda_d</math></td> <td>455 nm</td> <td>448 nm</td> <td>444 nm</td> </tr> <tr> <td><math>P_e</math></td> <td>0,979</td> <td>0,993</td> <td>0,996</td> </tr> </table>	Illuminant D65	x	0,154	0,160	0,163	y	0,029	0,018	0,014	Y	2,0	0,8	0,5	$\lambda_d$	455 nm	448 nm	444 nm	$P_e$	0,979	0,993	0,996
Illuminant D65	x			0,154	0,160	0,163																	
	y			0,029	0,018	0,014																	
	Y			2,0	0,8	0,5																	
	$\lambda_d$			455 nm	448 nm	444 nm																	
	$P_e$	0,979	0,993	0,996																			
<b>Spectral values guaranteed</b>	<b>Density</b>	<table border="1"> <tr> <td rowspan="5">Illuminant A</td> <td>x</td> <td>0,160</td> <td>0,166</td> <td>0,170</td> </tr> <tr> <td>y</td> <td>0,042</td> <td>0,024</td> <td>0,020</td> </tr> <tr> <td>Y</td> <td>0,9</td> <td>0,3</td> <td>0,2</td> </tr> <tr> <td><math>\lambda_d</math></td> <td>458 nm</td> <td>447 nm</td> <td>440 nm</td> </tr> <tr> <td><math>P_e</math></td> <td>0,958</td> <td>0,977</td> <td>0,978</td> </tr> </table>	Illuminant A	x	0,160	0,166	0,170	y	0,042	0,024	0,020	Y	0,9	0,3	0,2	$\lambda_d$	458 nm	447 nm	440 nm	$P_e$	0,958	0,977	0,978
Illuminant A	x			0,160	0,166	0,170																	
	y			0,042	0,024	0,020																	
	Y			0,9	0,3	0,2																	
	$\lambda_d$			458 nm	447 nm	440 nm																	
	$P_e$	0,958	0,977	0,978																			
$\tau_i$ (365 nm) $\geq 0,94$	$\rho = 2,55 \text{ g/cm}^3$																						
$\tau_i$ (633 nm) $\leq 0,00005$	<b>Knoop hardness</b>																						
	HK[0.1/20] = 438																						
	<b>Thermal properties</b>																						
	<b>Transformation temperature</b>																						
	$T_g = 478 \text{ }^\circ\text{C}$																						
	<b>Thermal expansion in <math>10^{-6}/\text{K}</math></b>																						
	$\alpha_{(-30^\circ\text{C}/+70^\circ\text{C})} = 8,8$																						
	$\alpha_{(20^\circ\text{C}/300^\circ\text{C})} = 10,1$																						
<b>Refractive indices</b>	<b>Chemical properties</b>	<b>Notes</b>																					
$n_F$ (486 nm) = 1,52	<b>Chemical resistance</b>	<b>UV</b>																					
$n_e$ (546 nm) = 1,51	FR class = 0	Transmission changes are possible under the action of intense ultraviolet radiation.																					
$n_d$ (587,6 nm) = 1,51	SR class = 1	Ionically colored glass																					
	AR class = 1	Bandpass filter / Shortpass filter																					
<b>Sellmeier coefficients</b>	<b>Resistance against humidity</b>																						
valid from 300 nm to 1600 nm	Sensitive glass	DIN 58131																					
$B_1 = 0,8735$	see pocket catalogue "Optical Filter Glass 2020", chapter 5.5																						
$B_2 = 0,3716$		<b>Disclaimer</b>																					
$B_3 = 1,1076$		All data without tolerances are to be understood to be reference values.																					
$C_1 = 9,390\text{E-}03 \text{ } \mu\text{m}^2$																							
$C_2 = 1,0998\text{E-}02 \text{ } \mu\text{m}^2$																							
$C_3 = 145,898 \text{ } \mu\text{m}^2$																							
<b>Internal quality</b>																							
Bubble class 1																							



BG3



**Internal transmittance  $\tau_i$  at reference thickness**  
**The internal transmittance values, tabulated and graphically represented, are reference values only**

$\lambda$ /nm	$\tau_i$	$\lambda$ /nm	$\tau_i$	$\lambda$ /nm	$\tau_i$	$\lambda$ /nm	$\tau_i$	$\lambda$ /nm	$\tau_i$	$\lambda$ /nm	$\tau_i$
200	< 1,0E-05	500	4,300E-02	800	9,902E-01	1100	6,665E-01	2200	6,200E-01	3700	4,038E-01
210	< 1,0E-05	510	1,276E-02	810	9,901E-01	1110	6,152E-01	2250	6,566E-01	3750	4,132E-01
220	< 1,0E-05	520	3,214E-03	820	9,900E-01	1120	5,680E-01	2300	7,009E-01	3800	4,226E-01
230	< 1,0E-05	530	6,442E-04	830	9,897E-01	1130	5,247E-01	2350	7,349E-01	3850	4,330E-01
240	1,9E-05	540	2,973E-04	840	9,895E-01	1140	4,800E-01	2400	7,538E-01	3900	4,462E-01
250	6,1E-03	550	6,182E-04	850	9,892E-01	1150	4,319E-01	2450	7,642E-01	3950	4,557E-01
260	1,0E-01	560	1,673E-03	860	9,889E-01	1160	3,884E-01	2500	7,651E-01	4000	4,600E-01
270	3,6E-01	570	1,000E-03	870	9,886E-01	1170	3,432E-01	2550	7,613E-01	4050	4,557E-01
280	6,3E-01	580	1,108E-04	880	9,883E-01	1180	3,081E-01	2600	7,557E-01	4100	4,400E-01
290	8,0E-01	590	< 1,000E-05	890	9,880E-01	1190	2,727E-01	2650	7,434E-01	4150	4,170E-01
300	9,0E-01	600	< 1,000E-05	900	9,877E-01	1200	2,412E-01	2700	7,236E-01	4200	3,915E-01
310	9,5E-01	610	1,340E-05	910	9,872E-01	1250	1,462E-01	2750	6,443E-01	4250	3,670E-01
320	9,734E-01	620	1,611E-05	920	9,860E-01	1300	1,200E-01	2800	5,868E-01	4300	3,368E-01
330	9,828E-01	630	1,167E-05	930	9,842E-01	1350	1,406E-01	2850	5,764E-01	4350	2,925E-01
340	9,858E-01	640	< 1,000E-05	940	9,810E-01	1400	1,500E-01	2900	5,717E-01	4400	2,500E-01
350	9,868E-01	650	< 1,000E-05	950	9,764E-01	1450	1,179E-01	2950	5,698E-01	4450	2,000E-01
360	9,866E-01	660	4,721E-05	960	9,712E-01	1500	1,000E-01	3000	5,623E-01	4500	1,600E-01
370	9,842E-01	670	5,929E-04	970	9,651E-01	1550	1,000E-01	3050	5,481E-01	4550	1,132E-01
380	9,812E-01	680	1,040E-02	980	9,574E-01	1600	1,236E-01	3100	5,264E-01	4600	7,780E-02
390	9,752E-01	690	1,004E-01	990	9,484E-01	1650	1,406E-01	3150	5,066E-01	4650	5,610E-02
400	9,510E-01	700	3,590E-01	1000	9,369E-01	1700	1,400E-01	3200	4,840E-01	4700	4,159E-02
410	9,160E-01	710	6,550E-01	1010	9,230E-01	1750	1,330E-01	3250	4,632E-01	4750	3,483E-02
420	8,740E-01	720	8,460E-01	1020	9,099E-01	1800	1,443E-01	3300	4,443E-01	4800	3,170E-02
430	8,150E-01	730	9,380E-01	1030	8,909E-01	1850	1,849E-01	3350	4,274E-01	4850	3,076E-02
440	7,450E-01	740	9,760E-01	1040	8,680E-01	1900	2,500E-01	3400	4,100E-01	4900	2,729E-02
450	6,580E-01	750	9,856E-01	1050	8,428E-01	1950	3,283E-01	3450	3,981E-01	4950	2,004E-02
460	5,500E-01	760	9,881E-01	1060	8,133E-01	2000	4,000E-01	3500	3,915E-01	5000	1,099E-02
470	3,930E-01	770	9,894E-01	1070	7,800E-01	2050	4,623E-01	3550	3,896E-01	5050	5,082E-03
480	2,220E-01	780	9,899E-01	1080	7,463E-01	2100	5,200E-01	3600	3,915E-01	5100	2,032E-03
490	9,700E-02	790	9,901E-01	1090	7,060E-01	2150	5,670E-01	3650	3,981E-01	5150	9,099E-04